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## (54) PROPOLIS FOOD COMPOSITION AND ITS PRODUCTION

(57)Abstract:
PROBLEM TO BE SOLVED: To produce an aqueous solution type propolis food composition good in liquid-phase stability, capable of improving the texture and having putrefaction preventing performances.
SOLUTION: This propolis food composition contains (A) a propolis component soluble in water alone or a mixture of water with a water-soluble solvent capable of forming hydrogen bond with the water, (B) water alone or a mixture of water with the water-soluble solvent capable of forming the hydrogen bond with the water, (C) an organic acid having ≥2 carboxyl groups or the carboxyl groups and amino group and, as necessary, (D) a polyol-fatty acid ester-based emulsifying agent. The content of the component (C) is 1-150 pts.wt. based on 100 pts.wt. of the total amount of the components (A) and (B) and the content of the component (D) is 0-25 pts.wt. based on 100 pts.wt. of the total amount of the components (A) and (B).

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JAPANESE [JP,2000-201634,A]

CLAIMS DETAILED DESCRIPTION TECHNICAL FIELD PRIOR ART EFFECT OF THE INVENTION TECHNICAL PROBLEM MEANS EXAMPLE

[Translation done.]

* NOTICES *



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CLAIMS

[Claim(s)]
[Claim 1] (A) A propolis component meltable into mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water, (B) Mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water, (C) The organic acid which has two or more carboxylic-acid radicals, or has a carboxylic-acid radical and an amino group, (D) polyol and a fatty-acid-ester system emulsifier are contained if needed. The content of per [ of the (A) component and the (B) component ] total quantity 100 weight section and the (C) component and in the 1 - 150 weight section (D) Propolis food constituent characterized by the content of a component being 0 - 25 weight section.
[Claim 2] (B) In mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water (C) One sort of the organic acid which has two or more carboxylic-acid radicals, or has a carboxylic-acid radical and an amino group, or two sorts or more are dissolved or distributed. Or a (E) propolis original lump is thrown in in the solution which carried out the micell dissolution of (D) polyol and the fatty-acid-ester system emulsifier further if needed. By carrying out heating mixing and separating insoluble propolis residue into the aforementioned (B) component from the propolis food constituent undiluted solution obtained at the process which obtains a propolis food constituent undiluted solution, and the last process (A) The manufacture approach of the propolis food constituent according to claim 1 characterized by including the process which obtains the solution of a meltable propolis component in mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water.
[Claim 3] The propolis food constituent according to claim 1 said whose organic acid is a citric acid.
[Claim 4] The manufacture approach of a propolis food constituent according to claim 2 that said organic acid is a citric acid.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to a propolis food constituent and its manufacture approach.
[0002]
[Description of the Prior Art] From ancient times, the propolis known as a natural antimicrobial agent is the quality of a solid of the shape of resin which the honeybee mixed a honeybee's own secrete, a bee wax, etc. to aggregates, such as matter of the specific part of a tree, the gums collected mainly from the sprout, or a bud and a bark, sap, and a vegetable pigment system, and perfumed oil, and was made. When eating this, if it remains as it is, since it is hard and unsuitable, what usually used as solution food by the solution extract which uses ethyl alcohol and a liquefied carbon dioxide, or was extracted was further compounded with polysaccharide etc., and it has been offered by changing into the condition of the solid food article which is easy to disassemble with saliva easily.
[0003] However, by the manufacture approach of the propolis food which uses a solvent system, in order to extract various kinds of impurity to coincidence, when eating, it re-condensed and there was difficulty also in respect of the taste.
[0004] On the other hand, the approach of building the product which is made to extract only water-soluble materials and is easy to eat was devised by contacting a propolis original lump and water, and by this approach, many active principles could not be taken out, and the taste peculiar to propolis was missing, and the problem had arisen also in respect of putrescibility.
[0005] From such a situation, as the approach of satisfying both the engine-performance side in a component extract, and the ease of eating, this invention person reaches previously invention which consists of a propolis food constituent using the micell of the hydrophilic solution of polyol and a fatty-acid-ester system emulsifier by the so-called micell extraction method, and its manufacture approach (JP,4-66544,B), and has been manufacturing the propolis food which becomes by the operation until now.
[0006]
[Problem(s) to be Solved by the Invention] This invention is the basis of such the present condition, and is stable, and it is easy to eat it, and moreover, mouthfeel is good and aims at offering the approach of manufacturing this thing efficiently for drainage system solution mold propolis food without putrescibility.
[0007]
[Means for Solving the Problem] In order that this invention persons may attain said purpose, as a result of repeating research wholeheartedly, a propolis original lump, The propolis food constituent which contains polyol and a fatty-acid-ester system emulsifier at a predetermined rate if needed [ of having mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water, and two or more carboxylic-acid radicals, or having a carboxylic-acid radical and an amino group / the organic acid and if needed ], respectively It found out that it was that from which the active principle is extracted so much more than the water extract and micell-ized extract propolis food which present a stable homogeneity solution or a solubilization condition, and are easy to eat, and are manufactured with the conventional technique. Moreover, after this propolis food constituent adds polyol and a fatty-acid-ester system emulsifier to mixture with the water soluble solvent which can carry out hydrogen bond to the following process, i.e., a water independent, or water, and water if needed, A propolis original lump is thrown into the mixed liquor which distributed [ distribute and it homogeneity-dissolved / mixed liquor ] the organic acid which has two or more carboxylic-acid radicals in this, or has a carboxylic-acid radical and an amino group. It found out that it could manufacture efficiently by heating and mixing and carrying out the process which obtains a propolis food constituent undiluted solution, and the process which separates propolis residue from the propolis food constituent undiluted solution obtained at the last process. This invention is completed based on these knowledge.
[0008] Namely, a propolis component meltable into mixture with the water soluble solvent which can carry out hydrogen bond of this invention to (A) water independent or water, and water, (B) Mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water, (C) The organic acid which has two or more carboxylic-acid radicals, or has a carboxylic-acid radical and an amino group, (D) polyol and a fatty-acid-ester system emulsifier are contained if needed. The content of per [ of the (A) component and the (B) component ] total quantity 100 weight section and the (C) component and in the 1 - 150 weight section (D) The propolis food constituent characterized by the content of a component being 0 - 25 weight section is offered.
[0009] Or it is made to distribute, moreover -- if the above-mentioned propolis food constituent follows the approach of this invention -- (B) water -- independent or the organic acid which has two or more (C) carboxylic-acid radicals in mixture with the water soluble solvent which can carry out hydrogen bond to water and water, or has a carboxylic-acid radical and an amino group -- the dissolution -- A (E) propolis original lump is thrown in in the solution which carried out the micell dissolution of (D) polyol and the fatty-acid-ester system emulsifier further if needed. By carrying out heating mixing and separating insoluble propolis residue into the aforementioned (B) component from the propolis food constituent undiluted solution obtained at the process which obtains a propolis food constituent undiluted solution, and the last process (A) It can manufacture by carrying out the process which obtains the solution of a meltable propolis component into mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water.
[0010]
[Embodiment of the Invention] In this invention, it is not restricted especially as a (E) propolis original lump which gives a meltable propolis component to mixture with the water soluble solvent which can carry out hydrogen bond to the water independent or water, and water which are the (A) component, but you may be the thing of what kind of the origin, for example,

the product from Brazil, the product from the U.S., the product from Germany, the product from China, the product from Australia, etc. can use all.
[0011] In this invention, mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water is used as a (B) component. Here, as an example of the water soluble solvent which can carry out hydrogen bond to water, there are ethyl alcohol, propylene glycol, a glycerol, D-xylose, D-sorbitol liquid, etc. These water soluble solvents may be independently used with water, and may mix and use two or more sorts.
[0012] As a (C) component in this invention, a citric acid, a malic acid, an adipic acid, an itaconic acid, a succinic acid, a fumaric acid, a tartaric acid, glutamic acid, an aspartic acid, etc. can be mentioned, for example.
[0013] Moreover, as a (D) component in this invention, it is (i). Glycerol = the fatty acid ester of a glycerol, such as mono-RAURATO, glycerol = mono-palmitate, glycerol = mono-stearate, glycerol = mono-oleate, glycerol = mono-RINORATO, and glycerol = mono-RISHINORATO, [0014] (ii) — diglycerol = — mono-RAURATO and diglycerol = mono-palmitate — Diglycerol = Mono-stearate, diglycerol = mono-oleate, Diglycerol = Mono-RINORATO, diglycerol = mono-RISHINORATO, Tetra-glycerol = Mono-RAURATO, tetra-glycerol = JIRAURATO, Tetra-glycerol = Mono-palmitate, tetra-glycerol = JIPARUMITATO, Tetra-glycerol = Mono-stearate, a tetra-glycerol = JISUTE alert, Tetra-glycerol = Mono-oleate, a tetra-glycerol = JIORE art, Tetra-glycerol = Mono-RINORATO, tetra-glycerol = JIRINORATO, Tetra-glycerol = Mono-RISHINORATO, tetra-glycerol = JIRISHINORATO, Tetra-glycerol = Mono-BEHENATO, tetra-glycerol = JIBEHENATO, PENTA glycerol = Mono-RAURATO, PENTA glycerol = JIRAURATO, PENTA glycerol = Mono-palmitate, PENTA glycerol = JIPARUMITATO, PENTA glycerol = Mono-stearate, a PENTA glycerol = JISUTE alert, PENTA glycerol = Mono-oleate, a PENTA glycerol = JIORE art, PENTA glycerol = Mono-RINORATO, PENTA glycerol = JIRINORATO, PENTA glycerol = Mono-RISHINORATO, PENTA glycerol = JIRISHINORATO, PENTA glycerol = Mono-BEHENATO, PENTA glycerol = JIBEHENATO, Deca glycerol = Mono-RAURATO, deca glycerol = JIRAURATO, Deca glycerol = TORIRAURATO, deca glycerol = mono-palmitate, Deca glycerol = JIPARUMITATO, deca glycerol = TORIPARUMITATO, Deca glycerol = Mono-stearate, a deca glycerol = JISUTE alert, Deca glycerol = A TORISUTE alert, deca glycerol = mono-oleate, Deca glycerol = A JIORE art, a deca glycerol = TORIORE art, Deca glycerol = Mono-RINORATO, deca glycerol = JIRINORATO, Deca glycerol = TORIRINORATO, deca glycerol = mono-RISHINORATO, Deca glycerol = JIRISHINORATO, deca glycerol = TORIRISHINORATO, Deca glycerol = Mono-BEHENATO, deca glycerol = JIBEHENATO, Deca glycerol = Ladle HENATO, deca glycerol = monochrome iso stearate, Deca glycerol = Sesquiiso stearate, deca glycerol = JIISO stearate, Deca glycerol = TORIISO stearate, deca glycerol = monochrome (12-hydroxy) stearate, Deca glycerol = the fatty acid ester of polyglycerin, such as JI (12-hydroxy) stearate and deca glycerol = Tori (12-hydroxy) stearate, [0015] (iii) Propylene glycol = the fatty acid ester of propylene glycol, such as mono-RAURATO, propylene glycol = mono-palmitate, propylene glycol = mono-stearate, propylene glycol = mono-oleate, propylene glycol = mono-RINORATO, propylene glycol = mono-RISHINORATO, propylene glycol = monochrome iso stearate, and propylene glycol = monochrome (12-hydroxy) stearate, [0016] JIRAURATO (iv) — sorbitan = — mono-RAURATO and sorbitan = — Sorbitan = Mono-palmitate, sorbitan = JIPARUMITATO, sorbitan = mono-stearate, Sorbitan = A JISUTE alert, sorbitan = mono-oleate, a sorbitan = JIORE art, Sorbitan = Mono-RINORATO, sorbitan = JIRINORATO, sorbitan = mono-RISHINORATO, Sorbitan = JIRISHINORATO, sorbitan = mono-BEHENATO, sorbitan = JIBEHENATO, Sorbitan = the fatty acid ester of sorbitan, such as monochrome iso stearate, sorbitan = JIISO stearate, sorbitan = monochrome (12-hydroxy) stearate, and sorbitan = JI (12-hydroxy) stearate, [0017] (v) Cane sugar = [ Mono-RAURATO, cane-sugar = JIRAURATO, cane-sugar = mono-palmitate, ] Cane sugar = JIPARUMITATO, cane-sugar = mono-stearate, a cane-sugar = JISUTE alert, Cane sugar = Mono-oleate, a cane-sugar = JIORE art, cane-sugar = mono-RINORATO, Cane sugar = JIRINORATO, cane-sugar = mono-RISHINORATO, cane-sugar = JIRISHINORATO, Cane sugar = the fatty acid ester of cane sugar, such as monochrome iso stearate, cane-sugar = JIISO stearate, cane-sugar = monochrome (12-hydroxy) stearate, and cane-sugar = JI (12-hydroxy) stearate, [0018] (vi) Lecithin, such as soybean-oil lecithin, etc. is mentioned.
[0019] The propolis food constituent of this invention contains the (D) component the aforementioned (A) component, the (B) component, the (C) component, and if needed, and the content of the organic acid which has two or more carboxylic-acid radicals of the (C) component, or has a carboxylic-acid radical and an amino group is chosen in the range of per [ 1 ] total quantity 100 weight section of the (A) component and the (B) component - the 150 weight sections. It becomes it is remarkable and difficult for the content of this (C) component to build a uniform stable constituent, if the holding power of the (A) component is weak and exceeds the 150 weight sections under in 1 weight section. (A) From both sides of the holding power of a component, and the stability of a constituent, the content with this desirable (C) component is the range of per [ 5 ] total quantity 100 weight section - the 100 weight sections of the (A) component and the (B) component, and the range of 10 - 75 weight section is especially suitable for it.
[0020] On the other hand, the content of the polyol and the fatty-acid-ester system emulsifier of the (D) component added if needed is chosen in the range below 25 weight sections per [ of the (A) component and the (B) component ] total quantity 100 weight section. If the content of this (D) component exceeds 25 weight sections, it will become it is remarkable and difficult to build the configuration of a constituent where homogeneity was maintained. In addition, when the (D) component is needed, from the solubilization force of the (A) component, and both sides of the configuration stability of a constituent, the content with this desirable (D) component is the range of per [ 0.1 ] total quantity 100 weight section - 10 weight sections of the (A) component and the (B) component, and the range of 1 - 5 weight section is especially suitable for it.
[0021] Next, the manufacture approach of the propolis food constituent of this invention is explained. After first adding the (E) component in the solution which dissolved [ homogeneity-] or distributed [ stable ] the (C) component or the (C) component, and the (D) component in the (B) component, 50-150 degrees C fully carries out mixed churning at 60-75 degrees preferably under ordinary pressure or pressurization. (E) You may combine with softening of a component, and atomization, and the (B) component and the (C) component, and the propolis food constituent undiluted solution that performs contact for the (D) component further and consists of mixture of water-soluble materials or water-soluble materials, and an oil solubility component are obtained.
[0022] Then, the solution of a meltable propolis component is extracted for the (B) component in this temperature requirement using a filter paper, a filtration cloth, a wire gauze, etc. ordinary pressure, pressurization, or by carrying out filtration under reduced pressure and making insoluble propolis residue divide into the (B) component. Thereby, the propolis food constituent of this invention can be obtained. Hereafter, it explains, mixing the result of a panel test about the example of this invention.
[0023]
[Example] The water 60 weight section and the malic-acid 40 weight section were taught to the open sand mold mixer equipped with a [example 1] agitator, a thermometer, and heating apparatus, churning was performed for 10 minutes at 60 degrees C under ordinary pressure, and the transparent and colorless homogeneity solution was created. Subsequently, the propolis original lump 20 weight section from Brazil was supplied, under ordinary pressure, churning is performed for 2 hours, mixed contact was carried

out at 60-70 degrees C, and the propolis food constituent undiluted solution which becomes water from the solution of a meltable propolis component and insoluble propolis residue was obtained. Then, the obtained propolis food constituent undiluted solution was filtered through the wire gauze of 200 meshes under ordinary pressure at 70 degrees C, the insoluble propolis residue in a propolis food constituent was separated, and the dark reddish-brown liquid-like propolis food constituent was manufactured.

[0024] The water 35 weight section, the D-xylose 35 weight section, and the glycine 30 weight section were taught to the closed mold mixer equipped with a [example 2] agitator, a thermometer, and heating apparatus, churning was performed for 10 minutes at 80 degrees C under ordinary pressure, and the homogeneity solution was created. Subsequently, the propolis original lump 30 weight section from Australia was supplied, mixed contact was carried out under churning at 70-80 degrees C under 3kg/cm2 pressurization for 1 hour, and the solution of a meltable propolis component and the propolis food constituent undiluted solution containing insoluble propolis residue were obtained in the D-xylose water solution. Then, the obtained propolis food constituent undiluted solution was filtered at 60-70 degrees C under reduced pressure of 50mmHg(s) using the No. 2 filter paper, the insoluble propolis residue in a propolis food constituent was separated, and the dark reddish-brown liquid-like propolis food constituent was manufactured.

[0025] The water 70 weight section, the citric-acid 30 weight section, and the tetra-glycerol = mono-oleate 1 weight section were taught to the closed mold mixer equipped with a [example 3] agitator, a thermometer, and heating apparatus, churning was performed for 30 minutes at 60 degrees C under ordinary pressure, and the homogeneity solution of opalescence translucence was created. Subsequently, the propolis original lump 20 weight section from Brazil was supplied, mixed contact was carried out under churning at 65-75 degrees C under ordinary pressure for 1 hour, and the solution of a meltable propolis component and the propolis food constituent undiluted solution containing insoluble propolis residue were obtained in water. Then, the obtained propolis food constituent undiluted solution was filtered through the No. 2 filter paper and the filtration cloth under the pressurization from ordinary pressure to 5kg/cm2, the insoluble propolis residue in a propolis food constituent was separated, and the liquefied brown propolis food constituent was manufactured.

[0026] The same component extract as an example 3 and filtration actuation performed on the basis of the following raw material combination, without using the organic acid of the [examples I and II of comparative study] (C) component.

Example I of a comparison .... The propolis original lump 20 weight section from Brazil, the water 70 weight section, the glycerol 30 weight section, and example II of a tetra-glycerol = mono-oleate 1 weight section comparison .. The propolis original lump 20 weight section from Brazil, the water 70 weight section, the gluconic-acid 30 weight section, and the tetra-glycerol = mono-oleate 1 weight section [0027] Seven kinds of propolis food constituents were manufactured like examples 1, 2, and 3 below the [examples 4-10] except having changed the rate into the class list of polyol and a fatty-acid-ester system emulsifier a propolis original lump, a solvent, a predetermined organic acid, and if needed. The raw material blending ratio of coal and the manufacture approach of these seven kinds of propolis food constituents are made a list, and are shown in Table 1.

[0028]

[Table 1]

表 1

| 実施例 | プロポリス原塊 | 溶剤 | 所定の有機酸 | ポリオール・脂肪酸エステル系乳化剤 | 製造方法 |
|---|---|---|---|---|---|
| 4 | ブラジル産<br>プロポリス原塊<br>15重量部 | 水 40重量部<br>エチルアルコール<br>45重量部 | リンゴ酸<br>1重量部 | ———— | 実施例1の製造方法に準ずる |
| 5 | ブラジル産<br>プロポリス原塊<br>25重量部 | 水 75重量部 | クエン酸<br>10重量部<br>リンゴ酸<br>10重量部 | ソルビタン=モノラウラート<br>3重量部 | 同上 |
| 6 | ブラジル産<br>プロポリス原塊<br>10重量部 | 水 40重量部<br>エチルアルコール<br>59.5重量部<br>プロピレングリコール<br>0.5重量部 | グルタミン酸<br>0.8重量部<br>コハク酸<br>0.2重量部 | ショ糖=モノオレアート<br>15重量部<br>プロピレングリコール=<br>モノオレアート<br>5重量部<br>大豆油レシチン<br>5重量部 | 実施例2の製造方法に準ずる |
| 7 | 米国産<br>プロポリス原塊<br>20重量部 | 水 20重量部<br>グリセリン<br>60重量部 | アジピン酸<br>1重量部<br>グリシン<br>9重量部<br>アラニン<br>10重量部 | グリセリン=モノラウラート<br>0.5重量部<br>ペンタグリセリン=<br>モノステアラート<br>1重量部 | 同上 |
| 8 | ドイツ産<br>プロポリス原塊<br>5重量部 | 水 80重量部<br>エチルアルコール<br>15重量部 | クエン酸<br>100重量部<br>リンゴ酸<br>25重量部<br>グリシン<br>25重量部 | ショ糖=モノラウラート<br>2重量部<br>ペンタグリセリン=<br>シリノラート<br>2重量部 | 実施例3の製造方法に準ずる |
| 9 | 中国産<br>プロポリス原塊<br>15重量部 | 水 30重量部<br>D-キシロース<br>55重量部 | アスパラギン酸<br>10重量部 | ———— | 同上 |
| 10 | オーストラリア産<br>プロポリス原塊<br>20重量部 | 水 70重量部<br>D-ソルビット<br>10重量部 | クエン酸<br>20重量部<br>グルタミン酸<br>20重量部 | ソルビタン=モノリシノラート<br>1重量部<br>テトラグリセリン=<br>モノリシノラート<br>1重量部 | 同上 |

[0029] 20 degrees C in which the general viable cell exists after taking 50g of each at a time two sorts of propolis food constituents obtained in ten sorts of propolis food constituents and the examples I and II of a comparison which were acquired in the [example 11] examples 1-10 on a petri dish and putting Dacron **** of 200 meshes upwards, and 60%RH — constant temperature — the room of constant humidity conditions was made to carry out standing for three months After continuing, taking Dacron **** and observing change of the appearance of three months after, the surface part was attached to the checking culture medium (however, the NISSUI PHARMACEUTICAL food stamp use), and 24hr culture was carried out at 37 degrees C.

[0030] Although the result was shown in Table 2, the propolis food constituent of this invention completely had stable acidity or alkalinity, and though it was a drainage system, moreover, bacillus generating by putrefaction was not seen, either.

[0031]

[Table 2]

表2

| 実 施 例 | 3ヶ月後の外観 | 一般生菌の有無 |
|---|---|---|
| 1 | 均一（変化なし） | 無 |
| 2 | 同 上 | 〃 |
| 3 | 〃 | 〃 |
| 4 | 〃 | 〃 |
| 5 | 〃 | 〃 |
| 6 | 〃 | 〃 |
| 7 | 〃 | 〃 |
| 8 | 〃 | 〃 |
| 9 | 〃 | 〃 |
| 10 | 〃 | 〃 |
| 比較例I | 表面に浮遊物生じる | 有 |
| 比較例II | 周りが黒ずむ | 〃 |

[0032] [Example 1 of a panel test] 120 man and woman who have the symptom of hypertension were chosen from the man and woman from 20 years old to 70 years old at random, and it considered as the candidate, and made the aquosity drink which added 1.0g of two sorts of propolis food constituents obtained in ten sorts of propolis food constituents and the examples I and II of a comparison which were acquired in the examples 1-10 in 100ml water, ten candidates be made to drink about one sort of drinks, and mouthfeel be investigated. It continues, and only each everybody's initial complement gave sake (the 1st class of however, the laurel wreath made from the Okura **** Co. use), and had you answer about the temper after 3-hour progress.
[0033] Although results of an investigation were shown in Table 3, the propolis food constituent of this invention was excellent in mouthfeel compared with the propolis food constituent of the examples I and II of a comparison, and it was checked that the engine-performance manifestation effectiveness is also very good.
[0034]
[Table 3]

表3

| 実 施 例 | 飲用時の食感 *1 | 飲酒終了3時間後の気分*2 |
|---|---|---|
| 1 | ◎ | A |
| 2 | ◎ | A |
| 3 | ◎ | A |
| 4 | ◎ | A |
| 5 | ◎ | A |
| 6 | ◎ | A |
| 7 | ◎ | A |
| 8 | ◎ | A |
| 9 | ◎ | A |
| 10 | ◎ | A |
| 比較例I | △ | B |
| 比較例II | ○ | C |

*1 The valuation basis of mouthfeel at the time of drink is as follows.
O — Thing O which eight or more persons sensed that the taste and coolness are good among ten persons' sample person — Seven or more persons sense that it is good about coolness among ten persons' sample person. Those who sensed that it was good about the taste are thing [ of five or less persons ] **. — Those who five or more persons sensed that were good about the taste, and sensed about coolness were good among ten persons' sample person are thing *2 of five or less persons. The valuation basis of the temper 3 hours after drinking termination is as follows.
A—10 persons' sample person all the members — the fatigue — it can take — a temper — the inside of a sample person of B—10 things it was sensed that became invigorating — 7-9 persons — the fatigue — it can take — a temper — the inside of the sample person of C—10 things it was sensed that became invigorating, and the fatigue — it can take — a temper — those who sensed that it became invigorating — six or less persons' thing [0035] [Example 2 of a panel test] Choose at random 120 man and woman who have the symptom of both the chronic rhinitis and pollinosis from the man and woman from 15 years old to 65 years old, and it considers as a candidate. Ten sorts of propolis food constituents and the example I of a comparison which were acquired in the examples 1-10 the aquosity drink which added 0.5g of two sorts of propolis food constituents obtained by II in 100ml water — making — one sort of drinks — ten candidates — a morning, daytime, and night — every [ a ter die ] — it was made to drink continuously for three months I had you answer about whether the symptom of the chronic rhinitis and pollinosis is sensed to get better after an appropriate time.
[0036] Although results of an investigation were shown in Table 4, it became clear that the propolis food constituent of this

invention was excellent in the engine-performance manifestation effectiveness compared with the propolis food constituent of the example I of a comparison manufactured by the conventional micell extraction method and the propolis food constituent of the example II of a comparison which blends the oxy acid additive which consists of one KARUBO acid radical.

[0037]

[Table 4]

表4

| 実 施 例 | 慢性鼻炎の症状の変化 *1 | 花粉症の症状の変化 *2 |
|---|---|---|
| 1 | ◎ | ◎ |
| 2 | ◎ | ◎ |
| 3 | ◎ | ◎ |
| 4 | ○ | ◎ |
| 5 | ◎ | ◎ |
| 6 | ◎ | ○ |
| 7 | ◎ | ◎ |
| 8 | ◎ | ◎ |
| 9 | ◎ | ◎ |
| 10 | ◎ | ◎ |
| 比較例I | △ | △ |
| 比較例II | △ | △ |

*1 The valuation basis of change of the symptom of the chronic rhinitis is as follows.

O — [ The valuation basis of change of the symptom of pollinosis is as follows. ] Thing O which all ten persons' sample persons sensed that the symptom got better — Thing ** which 7-9 persons sensed that the symptom got better among ten persons' sample person — Those who sensed that the symptom got better among ten persons' sample person are thing *2 of six or less persons.

O — Thing O which all ten persons' sample persons sensed that the symptom mitigated — Thing ** sensed that the symptom mitigated [ 7-9 persons ] among ten persons' sample person — Those who sensed that the symptom mitigated among ten persons' sample person are six or less persons' things [0038].

[Effect of the Invention] As stated above, the propolis food constituent and its manufacture approach of this invention In a drainage system homogeneity solution or the solution which carries out the micell dissolution of polyol and the fatty-acid-ester system emulsifier further into it By homogeneity-dissolving or making it distribute, the organic acid which it has [ organic acid ] two or more carboxylic-acid radicals, or is making a carboxylic-acid radical and the amino group live together Stopping the elution of the unnecessary impurity contained in the propolis original lump, it performs making an active principle extract, and a homogeneity liquid phase condition is held, and putrefaction tightness is also given, and the engine-performance manifestation effectiveness is heightened. Therefore, the propolis component content food of a more reliable drainage system which achieved the improvement in mouthfeel and preservation stability can be offered by carrying out this invention.

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[Translation done.]

* NOTICES *



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TECHNICAL FIELD

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[Field of the Invention] This invention relates to a propolis food constituent and its manufacture approach.

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[Translation done.]

* NOTICES *



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PRIOR ART

[Description of the Prior Art] From ancient times, the propolis known as a natural antimicrobial agent is the quality of a solid of the shape of resin which the honeybee mixed a honeybee's own secrete, a bee wax, etc. to aggregates, such as matter of the specific part of a tree, the gums collected mainly from the sprout, or a bud and a bark, sap, and a vegetable pigment system, and perfumed oil, and was made. When eating this, if it remains as it is, since it is hard and unsuitable, what usually used as solution food by the solution extract which uses ethyl alcohol and a liquefied carbon dioxide, or was extracted was further compounded with polysaccharide etc., and it has been offered by changing into the condition of the solid food article which is easy to disassemble with saliva easily.
[0003] However, by the manufacture approach of the propolis food which uses a solvent system, in order to extract various kinds of impurity to coincidence, when eating, it re-condensed and there was difficulty also in respect of the taste.
[0004] On the other hand, the approach of building the product which is made to extract only water-soluble materials and is easy to eat was devised by contacting a propolis original lump and water, and by this approach, many active principles could not be taken out, and the taste peculiar to propolis was missing, and the problem had arisen also in respect of putrescibility.
[0005] From such a situation, as the approach of satisfying both the engine-performance side in a component extract, and the ease of eating, this invention person reaches previously invention which consists of a propolis food constituent using the micell of the hydrophilic solution of polyol and a fatty-acid-ester system emulsifier by the so-called micell extraction method, and its manufacture approach (JP,4-66544,B), and has been manufacturing the propolis food which becomes by the operation until now.

[Translation done.]

## EFFECT OF THE INVENTION

[Effect of the Invention] As stated above, the propolis food constituent and its manufacture approach of this invention In a drainage system homogeneity solution or the solution which carries out the micell dissolution of polyol and the fatty-acid-ester system emulsifier further into it By homogeneity-dissolving or making it distribute, the organic acid which it has [ organic acid ] two or more carboxylic-acid radicals, or is making a carboxylic-acid radical and the amino group live together Stopping the elution of the unnecessary impurity contained in the propolis original lump, it performs making an active principle extract, and a homogeneity liquid phase condition is held, and putrefaction tightness is also given, and the engine-performance manifestation effectiveness is heightened. Therefore, the propolis component content food of a more reliable drainage system which achieved the improvement in mouthfeel and preservation stability can be offered by carrying out this invention.

[Translation done.]

* NOTICES *



TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] This invention is the basis of such the present condition, and is stable, and it is easy to eat it, and moreover, mouthfeel is good and aims at offering the approach of manufacturing this thing efficiently for drainage system solution mold propolis food without putrescibility.

[Translation done.]

* NOTICES *



MEANS

[Means for Solving the Problem] In order that this invention persons may attain said purpose, as a result of repeating research wholeheartedly, a propolis original lump, The propolis food constituent which contains polyol and a fatty-acid-ester system emulsifier at a predetermined rate if needed [ of having mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water, and two or more carboxylic-acid radicals, or having a carboxylic-acid radical and an amino group / the organic acid and if needed ], respectively It found out that it was that from which the active principle is extracted so much more than the water extract and micell-ized extract propolis food which present a stable homogeneity solution or a solubilization condition, and are easy to eat, and are manufactured with the conventional technique. Moreover, after this propolis food constituent adds polyol and a fatty-acid-ester system emulsifier to mixture with the water soluble solvent which can carry out hydrogen bond to the following process, i.e., a water independent, or water, and water if needed, A propolis original lump is thrown into the mixed liquor which distributed [ distribute and it homogeneity-dissolved / mixed liquor ] the organic acid which has two or more carboxylic-acid radicals in this, or has a carboxylic-acid radical and an amino group. It found out that it could manufacture efficiently by heating and mixing and carrying out the process which obtains a propolis food constituent undiluted solution, and the process which separates propolis residue from the propolis food constituent undiluted solution obtained at the last process. This invention is completed based on these knowledge.
[0008] Namely, a propolis component meltable into mixture with the water soluble solvent which can carry out hydrogen bond of this invention to (A) water independent or water, and water, (B) Mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water, (C) The organic acid which has two or more carboxylic-acid radicals, or has a carboxylic-acid radical and an amino group, (D) polyol and a fatty-acid-ester system emulsifier are contained if needed. The content of per [ of the (A) component and the (B) component ] total quantity 100 weight section and the (C) component and in the 1 - 150 weight section (D) The propolis food constituent characterized by the content of a component being 0 - 25 weight section is offered.
[0009] Or it is made to distribute, moreover — if the above-mentioned propolis food constituent follows the approach of this invention — (B) water — independent or the organic acid which has two or more (C) carboxylic-acid radicals in mixture with the water soluble solvent which can carry out hydrogen bond to water and water, or has a carboxylic-acid radical and an amino group — the dissolution — A (E) propolis original lump is thrown in in the solution which carried out the micell dissolution of (D) polyol and the fatty-acid-ester system emulsifier further if needed. By carrying out heating mixing and separating insoluble propolis residue into the aforementioned (B) component from the propolis food constituent undiluted solution obtained at the process which obtains a propolis food constituent undiluted solution, and the last process (A) It can manufacture by carrying out the process which obtains the solution of a meltable propolis component into mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water.
[0010]
[Embodiment of the Invention] In this invention, it is not restricted especially as a (E) propolis original lump which gives a meltable propolis component to mixture with the water soluble solvent which can carry out hydrogen bond to the water independent or water, and water which are the (A) component, but you may be the thing of what kind of the origin, for example, the product from Brazil, the product from the U.S., the product from Germany, the product from China, the product from Australia, etc. can use all.
[0011] In this invention, mixture with the water soluble solvent which can carry out hydrogen bond to a water independent or water, and water is used as a (B) component. Here, as an example of the water soluble solvent which can carry out hydrogen bond to water, there are ethyl alcohol, propylene glycol, a glycerol, D-xylose, D-sorbitol liquid, etc. These water soluble solvents may be independently used with water, and may mix and use two or more sorts.
[0012] As a (C) component in this invention, a citric acid, a malic acid, an adipic acid, an itaconic acid, a succinic acid, a fumaric acid, a tartaric acid, glutamic acid, an aspartic acid, etc. can be mentioned, for example.
[0013] Moreover, as a (D) component in this invention, it is (i). Glycerol = the fatty acid ester of a glycerol, such as mono-RAURATO, glycerol = mono-palmitate, glycerol = mono-stearate, glycerol = mono-oleate, glycerol = mono-RINORATO, and glycerol = mono-RISHINORATO, [0014] (ii) — diglycerol = — mono-RAURATO and diglycerol = mono-palmitate — Diglycerol = Mono-stearate, diglycerol = mono-oleate, Diglycerol = Mono-RINORATO, diglycerol = mono-RISHINORATO, Tetra-glycerol = Mono-RAURATO, tetra-glycerol = JIRAURATO, Tetra-glycerol = Mono-palmitate, tetra-glycerol = JIPARUMITATO, Tetra-glycerol = Mono-stearate, a tetra-glycerol = JISUTE alert, Tetra-glycerol = Mono-oleate, a tetra-glycerol = JIORE art, Tetra-glycerol = Mono-RINORATO, tetra-glycerol = JIRINORATO, Tetra-glycerol = Mono-RISHINORATO, tetra-glycerol = JIRISHINORATO, Tetra-glycerol = Mono-BEHENATO, tetra-glycerol = JIBEHENATO, PENTA glycerol = Mono-RAURATO, PENTA glycerol = JIRAURATO, PENTA glycerol = Mono-palmitate, PENTA glycerol = JIPARUMITATO, PENTA glycerol = Mono-stearate, a PENTA glycerol = JISUTE alert, PENTA glycerol = Mono-oleate, a PENTA glycerol = JIORE art, PENTA glycerol = Mono-RINORATO, PENTA glycerol = JIRINORATO, PENTA glycerol = Mono-RISHINORATO, PENTA glycerol = JIRISHINORATO, PENTA glycerol = Mono-BEHENATO, PENTA glycerol = JIBEHENATO, Deca glycerol = Mono-RAURATO, deca glycerol = JIRAURATO, Deca glycerol = TORIRAURATO, deca glycerol = mono-palmitate, Deca glycerol = JIPARUMITATO, deca glycerol = TORIPARUMITATO, Deca glycerol = Mono-stearate, a deca glycerol = JISUTE alert, Deca glycerol = A TORISUTE alert, deca glycerol = mono-oleate, Deca glycerol = A JIORE art, a deca glycerol = TORIORE art, Deca glycerol = Mono-RINORATO, deca glycerol = JIRINORATO, Deca glycerol = TORIRINORATO, deca glycerol = mono-RISHINORATO, Deca glycerol = JIRISHINORATO, deca glycerol = TORIRISHINORATO, Deca glycerol = Mono-BEHENATO, deca glycerol = JIBEHENATO, Deca

glycerol = Ladle HENATO, deca glycerol = monochrome iso stearate, Deca glycerol = Sesquiiso stearate, deca glycerol = JIISO stearate, Deca glycerol = TORIISO stearate, deca glycerol = monochrome (12-hydroxy) stearate, Deca glycerol = the fatty acid ester of polyglycerin, such as JI (12-hydroxy) stearate and deca glycerol = Tori (12-hydroxy) stearate, [0015] (iii) Propylene glycol = the fatty acid ester of propylene glycol, such as mono-RAURATO, propylene glycol = mono-palmitate, propylene glycol = mono-stearate, propylene glycol = mono-oleate, propylene glycol = mono-RINORATO, propylene glycol = mono-RISHINORATO, propylene glycol = monochrome iso stearate, and propylene glycol = monochrome (12-hydroxy) stearate, [0016] JIRAURATO (iv) -- sorbitan = -- mono-RAURATO and sorbitan = -- Sorbitan = Mono-palmitate, sorbitan = JIPARUMITATO, sorbitan = mono-stearate, Sorbitan = A JISUTE alert, sorbitan = mono-oleate, a sorbitan = JIORE art, Sorbitan = Mono-RINORATO, sorbitan = JIRINORATO, sorbitan = mono-RISHINORATO, Sorbitan = JIRISHINORATO, sorbitan = mono-BEHENATO, sorbitan = JIBEHENATO, Sorbitan = the fatty acid ester of sorbitan, such as monochrome iso stearate, sorbitan = JIISO stearate, sorbitan = monochrome (12-hydroxy) stearate, and sorbitan = JI (12-hydroxy) stearate, [0017] (v) Cane sugar = [ Mono-RAURATO, cane-sugar = JIRAURATO, cane-sugar = mono-palmitate, ] Cane sugar = JIPARUMITATO, cane-sugar = mono-stearate, a cane-sugar = JISUTE alert, Cane sugar = Mono-oleate, a cane-sugar = JIORE art, cane-sugar = mono-RINORATO, Cane sugar = JIRINORATO, cane-sugar = mono-RISHINORATO, cane-sugar = JIRISHINORATO, Cane sugar = the fatty acid ester of cane sugar, such as monochrome iso stearate, cane-sugar = JIISO stearate, cane-sugar = monochrome (12-hydroxy) stearate, and cane-sugar = JI (12-hydroxy) stearate, [0018] (vi) Lecithin, such as soybean-oil lecithin, etc. is mentioned.

[0019] The propolis food constituent of this invention contains the (D) component the aforementioned (A) component, the (B) component, the (C) component, and if needed, and the content of the organic acid which has two or more carboxylic-acid radicals of the (C) component, or has a carboxylic-acid radical and an amino group is chosen in the range of per [ 1 ] total quantity 100 weight section of the (A) component and the (B) component - the 150 weight sections. It becomes it is remarkable and difficult for the content of this (C) component to build a uniform stable constituent, if the holding power of the (A) component is weak and exceeds the 150 weight sections under in 1 weight section. (A) From both sides of the holding power of a component, and the stability of a constituent, the content with this desirable (C) component is the range of per [ 5 ] total quantity 100 weight section - the 100 weight sections of the (A) component and the (B) component, and the range of 10 - 75 weight section is especially suitable for it.

[0020] On the other hand, the content of the polyol and the fatty-acid-ester system emulsifier of the (D) component added if needed is chosen in the range below 25 weight sections per [ of the (A) component and the (B) component ] total quantity 100 weight section. If the content of this (D) component exceeds 25 weight sections, it will become it is remarkable and difficult to build the configuration of a constituent where homogeneity was maintained. In addition, when the (D) component is needed, from the solubilization force of the (A) component, and both sides of the configuration stability of a constituent, the content with this desirable (D) component is the range of per [ 0.1 ] total quantity 100 weight section - 10 weight sections of the (A) component and the (B) component, and the range of 1 - 5 weight section is especially suitable for it.

[0021] Next, the manufacture approach of the propolis food constituent of this invention is explained. After first adding the (E) component in the solution which dissolved [ homogeneity-] or distributed [ stable ] the (C) component or the (C) component, and the (D) component in the (B) component, 50-150 degrees C fully carries out mixed churning at 60-75 degrees preferably under ordinary pressure or pressurization. (E) You may combine with softening of a component, and atomization, and the (B) component and the (C) component, and the propolis food constituent undiluted solution that performs contact for the (D) component further and consists of mixture of water-soluble materials or water-soluble materials, and an oil solubility component are obtained.

[0022] Then, the solution of a meltable propolis component is extracted for the (B) component in this temperature requirement using a filter paper, a filtration cloth, a wire gauze, etc. ordinary pressure, pressurization, or by carrying out filtration under reduced pressure and making insoluble propolis residue divide into the (B) component. Thereby, the propolis food constituent of this invention can be obtained. Hereafter, it explains, mixing the result of a panel test about the example of this invention.

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[Translation done.]

EXAMPLE

[Example] The water 60 weight section and the malic-acid 40 weight section were taught to the open sand mold mixer equipped with a [example 1] agitator, a thermometer, and heating apparatus, churning was performed for 10 minutes at 60 degrees C under ordinary pressure, and the transparent and colorless homogeneity solution was created. Subsequently, the propolis original lump 20 weight section from Brazil was supplied, under ordinary pressure, churning is performed for 2 hours, mixed contact was carried out at 60-70 degrees C, and the propolis food constituent undiluted solution which becomes water from the solution of a meltable propolis component and insoluble propolis residue was obtained. Then, the obtained propolis food constituent undiluted solution was filtered through the wire gauze of 200 meshes under ordinary pressure at 70 degrees C, the insoluble propolis residue in a propolis food constituent was separated, and the dark reddish-brown liquid-like propolis food constituent was manufactured.
[0024] The water 35 weight section, the D-xylose 35 weight section, and the glycine 30 weight section were taught to the closed mold mixer equipped with a [example 2] agitator, a thermometer, and heating apparatus, churning was performed for 10 minutes at 80 degrees C under ordinary pressure, and the homogeneity solution was created. Subsequently, the propolis original lump 30 weight section from Australia was supplied, mixed contact was carried out under churning at 70-80 degrees C under 3kg/cm2 pressurization for 1 hour, and the solution of a meltable propolis component and the propolis food constituent undiluted solution containing insoluble propolis residue were obtained in the D-xylose water solution. Then, the obtained propolis food constituent undiluted solution was filtered at 60-70 degrees C under reduced pressure of 50mmHg(s) using the No. 2 filter paper, the insoluble propolis residue in a propolis food constituent was separated, and the dark reddish-brown liquid-like propolis food constituent was manufactured.
[0025] The water 70 weight section, the citric-acid 30 weight section, and the tetra-glycerol = mono-oleate 1 weight section were taught to the closed mold mixer equipped with a [example 3] agitator, a thermometer, and heating apparatus, churning was performed for 30 minutes at 60 degrees C under ordinary pressure, and the homogeneity solution of opalescence translucence was created. Subsequently, the propolis original lump 20 weight section from Brazil was supplied, mixed contact was carried out under churning at 65-75 degrees C under ordinary pressure for 1 hour, and the solution of a meltable propolis component and the propolis food constituent undiluted solution containing insoluble propolis residue were obtained in water. Then, the obtained propolis food constituent undiluted solution was filtered through the No. 2 filter paper and the filtration cloth under the pressurization from ordinary pressure to 5kg/cm2, the insoluble propolis residue in a propolis food constituent was separated, and the liquefied brown propolis food constituent was manufactured.
[0026] The same component extract as an example 3 and filtration actuation performed on the basis of the following raw material combination, without using the organic acid of the [examples I and II of comparative study] (C) component.
Example I of a comparison .... The propolis original lump 20 weight section from Brazil, the water 70 weight section, the glycerol 30 weight section, and example II of a tetra-glycerol = mono-oleate 1 weight section comparison .. The propolis original lump 20 weight section from Brazil, the water 70 weight section, the gluconic-acid 30 weight section, and the tetra-glycerol = mono-oleate 1 weight section [0027] Seven kinds of propolis food constituents were manufactured like examples 1, 2, and 3 below the [examples 4-10] except having changed the rate into the class list of polyol and a fatty-acid-ester system emulsifier a propolis original lump, a solvent, a predetermined organic acid, and if needed. The raw material blending ratio of coal and the manufacture approach of these seven kinds of propolis food constituents are made a list, and are shown in Table 1.
[0028]
[Table 1]

表1

| 実施例 | プロポリス原塊 | 溶剤 | 所定の有機酸 | ポリオール・脂肪酸エステル系乳化剤 | 製造方法 |
|---|---|---|---|---|---|
| 4 | ブラジル産<br>プロポリス原塊<br>15重量部 | 水 40重量部<br>エチルアルコール<br>45重量部 | リンゴ酸<br>1重量部 | ―――― | 実施例1の製造方法に準ずる |
| 5 | ブラジル産<br>プロポリス原塊<br>25重量部 | 水 75重量部 | クエン酸<br>10重量部<br>リンゴ酸<br>10重量部 | ソルビタン=モノラウラート<br>3重量部 | 同上 |
| 6 | ブラジル産<br>プロポリス原塊<br>10重量部 | 水 40重量部<br>エチルアルコール<br>59.5重量部<br>プロピレングリコール<br>0.5重量部 | グルタミン酸<br>0.8重量部<br>コハク酸<br>0.2重量部 | ショ糖=モノオレアート<br>15重量部<br>プロピレングリコール=<br>モノオレアート<br>5重量部<br>大豆油レシチン<br>5重量部 | 実施例2の製造方法に準ずる |
| 7 | 米国産<br>プロポリス原塊<br>20重量部 | 水 20重量部<br>グリセリン<br>60重量部 | アジピン酸<br>1重量部<br>グリシン<br>9重量部<br>アラニン<br>10重量部 | グリセリン=モノラウラート<br>0.5重量部<br>ペンタグリセリン=<br>モノステアラート<br>1重量部 | 同上 |
| 8 | ドイツ産<br>プロポリス原塊<br>5重量部 | 水 80重量部<br>エチルアルコール<br>15重量部 | クエン酸<br>100重量部<br>リンゴ酸<br>25重量部<br>グリシン<br>25重量部 | ショ糖=モノラウラート<br>2重量部<br>ペンタグリセリン=<br>シリノラート<br>2重量部 | 実施例3の製造方法に準ずる |
| 9 | 中国産<br>プロポリス原塊<br>15重量部 | 水 30重量部<br>D-キシロース<br>55重量部 | アスパラギン酸<br>10重量部 | ―――― | 同上 |
| 10 | オーストラリア産<br>プロポリス原塊<br>20重量部 | 水 70重量部<br>D-ソルビット<br>10重量部 | クエン酸<br>20重量部<br>グルタミン酸<br>20重量部 | ソルビタン=モノリシノラート<br>1重量部<br>テトラグリセリン=<br>モノリシノラート<br>1重量部 | 同上 |

[0029] 20 degrees C in which the general viable cell exists after taking 50g of each at a time two sorts of propolis food constituents obtained in ten sorts of propolis food constituents and the examples I and II of a comparison which were acquired in the [example 11] examples 1-10 on a petri dish and putting Dacron **** of 200 meshes upwards, and 60%RH -- constant temperature -- the room of constant humidity conditions was made to carry out standing for three months After continuing, taking Dacron **** and observing change of the appearance of three months after, the surface part was attached to the checking culture medium (however, the NISSUI PHARMACEUTICAL food stamp use), and 24hr culture was carried out at 37 degrees C.

[0030] Although the result was shown in Table 2, the propolis food constituent of this invention completely had stable acidity or alkalinity, and though it was a drainage system, moreover, bacillus generating by putrefaction was not seen, either.

[0031]

[Table 2]

表2

| 実 施 例 | 3ヶ月後の外観 | 一般生菌の有無 |
|---|---|---|
| 1 | 均一（変化なし） | 無 |
| 2 | 同 上 | 〃 |
| 3 | 〃 | 〃 |
| 4 | 〃 | 〃 |
| 5 | 〃 | 〃 |
| 6 | 〃 | 〃 |
| 7 | 〃 | 〃 |
| 8 | 〃 | 〃 |
| 9 | 〃 | 〃 |
| 10 | 〃 | 〃 |
| 比較例I | 表面に浮遊物生じる | 有 |
| 比較例II | 周りが黒ずむ | 〃 |

[0032] [Example 1 of a panel test] 120 man and woman who have the symptom of hypertension were chosen from the man and woman from 20 years old to 70 years old at random, and it considered as the candidate, and made the aquosity drink which added 1.0g of two sorts of propolis food constituents and the examples I and II of a comparison which were acquired in the examples 1-10 in 100ml water, ten candidates be made to drink about one sort of drinks, and mouthfeel be investigated. It continues, and only each everybody's initial complement gave sake (the 1st class of however, the laurel wreath made from the Okura **** Co. use), and had you answer about the temper after 3-hour progress.
[0033] Although results of an investigation were shown in Table 3, the propolis food constituent of this invention was excellent in mouthfeel compared with the propolis food constituent of the examples I and II of a comparison, and it was checked that the engine-performance manifestation effectiveness is also very good.
[0034]
[Table 3]

表3

| 実 施 例 | 飲用時の食感 *1 | 飲酒終了3時間後の気分*2 |
|---|---|---|
| 1 | ◎ | A |
| 2 | ◎ | A |
| 3 | ◎ | A |
| 4 | ◎ | A |
| 5 | ◎ | A |
| 6 | ◎ | A |
| 7 | ◎ | A |
| 8 | ◎ | A |
| 9 | ◎ | A |
| 10 | ◎ | A |
| 比較例I | △ | B |
| 比較例II | ○ | C |

*1 The valuation basis of mouthfeel at the time of drink is as follows.
O — Thing O which eight or more persons sensed that the taste and coolness are good among ten persons' sample person — Seven or more persons sense that it is good about coolness among ten persons' sample person. Those who sensed that it was good about the taste are thing [ of five or less persons ] **. — Those who five or more persons sensed that were good about the taste, and sensed about coolness were good among ten persons' sample person are thing *2 of five or less persons. The valuation basis of the temper 3 hours after drinking termination is as follows.
A—10 persons' sample person all the members — the fatigue — it can take — a temper — the inside of a sample person of B—10 things it was sensed that became invigorating — 7-9 persons — the fatigue — it can take — a temper — the inside of the sample person of C—10 things it was sensed that became invigorating, and the fatigue — it can take — a temper — those who sensed that it became invigorating — six or less persons' thing [0035] [Example 2 of a panel test] Choose at random 120 man and woman who have the symptom of both the chronic rhinitis and pollinosis from the man and woman from 15 years old to 65 years old, and it considers as a candidate. Ten sorts of propolis food constituents and the example I of a comparison which were acquired in the examples 1-10 the aquosity drink which added 0.5g of two sorts of propolis food constituents obtained by II in 100ml water — making — one sort of drinks — ten candidates — a morning, daytime, and night — every [ a ter die ] — it was made to drink continuously for three months I had you answer about whether the symptom of the chronic rhinitis and pollinosis is sensed to get better after an appropriate time.
[0036] Although results of an investigation were shown in Table 4, it became clear that the propolis food constituent of this

invention was excellent in the engine-performance manifestation effectiveness compared with the propolis food constituent of the example I of a comparison manufactured by the conventional micell extraction method and the propolis food constituent of the example II of a comparison which blends the oxy acid additive which consists of one KARUBO acid radical.

[0037]

[Table 4]

表4

| 実　施　例 | 慢性鼻炎の症状の変化 *1 | 花粉症の症状の変化 *2 |
|---|---|---|
| 1 | ◎ | ◎ |
| 2 | ◎ | ◎ |
| 3 | ◎ | ◎ |
| 4 | ○ | ◎ |
| 5 | ◎ | ◎ |
| 6 | ◎ | ○ |
| 7 | ◎ | ◎ |
| 8 | ◎ | ◎ |
| 9 | ◎ | ◎ |
| 10 | ◎ | ◎ |
| 比較例I | △ | △ |
| 比較例II | △ | △ |

*1 The valuation basis of change of the symptom of the chronic rhinitis is as follows.

O — [ The valuation basis of change of the symptom of pollinosis is as follows. ] Thing O which all ten persons' sample persons sensed that the symptom got better — Thing ** which 7-9 persons sensed that the symptom got better among ten persons' sample person — Those who sensed that the symptom got better among ten persons' sample person are thing *2 of six or less persons.

O — Thing O which all ten persons' sample persons sensed that the symptom mitigated — Thing ** sensed that the symptom mitigated [ 7-9 persons ] among ten persons' sample person — Those who sensed that the symptom mitigated among ten persons' sample person are six or less persons' things.

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[Translation done.]

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(54)【発明の名称】プロポリス食品組成物及びその製造方法

(57)【要約】
【課題】　液相安定性が良好で、食感を向上させ、しかも腐敗防止性能を備えた水系溶液型のプロポリス食品組成物を提供する。
【解決手段】　（Ａ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物に可溶のプロポリス成分、（Ｂ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物、（Ｃ）カルボン酸基を２個以上有するか又はカルボン酸基とアミノ基とを有する有機酸、及び必要に応じて（Ｄ）ポリオール・脂肪酸エステル系乳化剤を含有し、かつ、（Ａ）成分と（Ｂ）成分との合計量１００重量部当たり、（Ｃ）成分の含有量が１～１５０重量部で、（Ｄ）成分の含有量が０～２５重量部であることを特徴とする、プロポリス食品組成物。

1

【特許請求の範囲】

【請求項１】　（Ａ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物に可溶のプロポリス成分、（Ｂ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物、（Ｃ）カルボン酸基を２個以上有するか又はカルボン酸基とアミノ基とを有する有機酸、及び必要に応じて（Ｄ）ポリオール・脂肪酸エステル系乳化剤を含有し、かつ、（Ａ）成分と（Ｂ）成分との合計量１００重量部当たり、（Ｃ）成分の含有量が１～１５０重量部で、（Ｄ）成分の含有量が０～２５重量部であることを特徴とする、プロポリス食品組成物。

【請求項２】　（Ｂ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物中に、（Ｃ）カルボン酸基を２個以上有するか又はカルボン酸基とアミノ基とを有する有機酸の１種若しくは２種以上を溶解若しくは分散させ、または、必要に応じてさらに（Ｄ）ポリオール・脂肪酸エステル系乳化剤をミセル溶解させた溶液の中に（Ｅ）プロポリス原塊を投入して、加熱混合して、プロポリス食品組成物原液を得る工程と、前工程で得られたプロポリス食品組成物原液から、前記（Ｂ）成分に不溶のプロポリス残渣を分離することにより、（Ａ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物に可溶のプロポリス成分の溶液を得る工程とを含むことを特徴とする、請求項１に記載のプロポリス食品組成物の製造方法。

【請求項３】　前記有機酸がクエン酸である、請求項１に記載のプロポリス食品組成物。

【請求項４】　前記有機酸がクエン酸である、請求項２に記載のプロポリス食品組成物の製造方法。

【発明の詳細な説明】

【０００１】

【発明の属する技術分野】本発明は、プロポリス食品組成物及びその製造方法に関する。

【０００２】

【従来の技術】古来、天然の抗菌剤として知られるプロポリスは、ミツバチが樹木の特定部位、主として新芽や蕾及び樹皮から採集したガム質、樹液、植物色素系の物質及び香油などの集合体に、ミツバチ自身の分泌物、蜂ろうなどを混合して作られた樹脂状の固形物質である。これを食する場合には、そのままでは硬くて不適であるために、通常、エチルアルコールや液化炭酸ガスを用いる溶液抽出によって溶液食品とするか、あるいは、抽出したものをさらに多糖類等と複合させて、唾液によって容易に分解し易い固形食品の状態にして、供されてきた。

【０００３】しかしながら、溶媒系を使用するプロポリス食品の製造方法では、各種の夾雑物を同時に抽出してしまうために、食する際に再凝集してしまったり、また、味覚の点でも難があった。

【０００４】一方、プロポリス原塊と水とを接触させることにより、水溶性成分だけを抽出させて、食し易い製品をつくる方法も講じられているが、この方法では、有効成分を多く取り出し得ず、プロポリス特有の味覚に欠け、また、腐敗性の点でも問題が生じていた。

2

【０００５】このような事情から、本発明者は成分抽出における性能面と食し易さの両方を満足させる方法として、ポリオール・脂肪酸エステル系乳化剤の親水性溶液のミセルを利用した、いわゆるミセル抽出法による、プロポリス食品組成物およびその製造方法よりなる発明に先に到達し（特公平４－６６５４４号公報）、これまで、その実施によりなるプロポリス食品を製造してきている。

【０００６】

【発明が解決しようとする課題】本発明は、そのような現状のもとで、安定で、かつ、食し易く、しかも食感が良好で、腐敗性のない、水系溶液型プロポリス食品と、このものを効率良く製造する方法を提供することを目的とするものである。

【０００７】

【課題を解決するための手段】本発明者らは、前記目的を達成するために鋭意研究を重ねた結果、プロポリス原塊、水単独又は水及び水と水素結合し得る水溶性溶剤との混合物、カルボン酸基を２個以上有するか又はカルボン酸基とアミノ基とを有する有機酸および必要に応じてポリオール・脂肪酸エステル系乳化剤をそれぞれ所定の割合で含有するプロポリス食品組成物が、安定な均一溶液若しくは可溶化状態を呈して、食し易く、かつ、従来技術で製造されている水抽出及びミセル化抽出プロポリス食品よりも多量に有効成分が抽出されているものになっていることを見出した。また、このプロポリス食品組成物が、次の工程、すなわち、水単独又は水及び水と水素結合し得る水溶性溶剤との混合物に必要に応じてポリオール・脂肪酸エステル系乳化剤を加えた後、これにカルボン酸基を２個以上有するか又はカルボン酸基とアミノ基とを有する有機酸を均一溶解あるいは分散させた混合液にプロポリス原塊を投入して、加熱、混合して、プロポリス食品組成物原液を得る工程、および前工程で得られたプロポリス食品組成物原液からプロポリス残渣を分離する工程を実施することにより、効率良く製造し得ることを見い出した。本発明は、これらの知見に基づいて完成したものである。

【０００８】すなわち、本発明は、（Ａ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物に可溶のプロポリス成分、（Ｂ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物、（Ｃ）カルボン酸基を２個以上有するか若しくはカルボン酸基とアミノ基とを有する有機酸、及び必要に応じて（Ｄ）ポリオール・脂肪酸エステル系乳化剤を含有し、かつ、（Ａ）成分と（Ｂ）成分との合計量１００重量部当たり、（Ｃ）成分の含有量が１～１５０重量部で、（Ｄ）成分の含有量が

０～２５重量部であることを特徴とするプロポリス食品組成物を提供するものである。

【０００９】また、上記プロポリス食品組成物は、本発明の方法に従えば、（Ｂ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物中に（Ｃ）カルボン酸基を２個以上有するか又はカルボン酸基とアミノ基とを有する有機酸を溶解若しくは分散させ、または、必要に応じてさらに（Ｄ）ポリオール・脂肪酸エステル系乳化剤をミセル溶解させた溶液の中に（Ｅ）プロポリス原塊を投入して、加熱混合し、プロポリス食品組成物原液を得る工程と、前工程で得られたプロポリス食品組成物原液から、前記（Ｂ）成分に不溶のプロポリス残渣を分離することにより、（Ａ）水単独又は水及び水と水素結合し得る水溶性溶剤との混合物に可溶のプロポリス成分の溶液を得る工程とを実施することによって製造することができる。

【００１０】

【発明の実施の形態】本発明においては、（Ａ）成分である水単独又は水及び水と水素結合し得る水溶性溶剤との混合物に可溶のプロポリス成分を与える（Ｅ）プロポリス原塊としては特に制限されず、いかなる由来のものであっても良く、例えば、ブラジル産、米国産、ドイツ産、中国産、オーストラリア産など、いずれも用いることができる。

【００１１】本発明においては、（Ｂ）成分として、水単独又は水及び水と水素結合し得る水溶性溶剤との混合物が用いられる。ここで、水と水素結合し得る水溶性溶剤の例としては、エチルアルコール、プロピレングリコール、グリセリン、Ｄ－キシロース、Ｄ－ソルビット液等がある。これらの水溶性溶剤は単独で水と共に用いても良いし、２種以上を混合して用いても良い。

【００１２】本発明における（Ｃ）成分としては、例えば、クエン酸、リンゴ酸、アジピン酸、イタコン酸、コハク酸、フマル酸、酒石酸、グルタミン酸、アスパラギン酸等を挙げることができる。

【００１３】また、本発明における（Ｄ）成分としては、

(i) グリセリン＝モノラウラート、グリセリン＝モノパルミタート、グリセリン＝モノステアラート、グリセリン＝モノオレアート、グリセリン＝モノリノラート、グリセリン＝モノリシノラート等の、グリセリンの脂肪酸エステル、

【００１４】(ii)ジグリセリン＝モノラウラート、ジグリセリン＝モノパルミタート、ジグリセリン＝モノステアラート、ジグリセリン＝モノオレアート、ジグリセリン＝モノリノラート、ジグリセリン＝モノリシノラート、テトラグリセリン＝モノラウラート、テトラグリセリン＝ジラウラート、テトラグリセリン＝モノパルミタート、テトラグリセリン＝ジパルミタート、テトラグリセリン＝モノステアラート、テトラグリセリン＝ジステアラート、テトラグリセリン＝モノオレアート、テトラグリセリン＝ジオレアート、テトラグリセリン＝モノリノラート、テトラグリセリン＝ジリノラート、テトラグリセリン＝モノリシノラート、テトラグリセリン＝ジリシノラート、テトラグリセリン＝モノベヘナート、テトラグリセリン＝ジベヘナート、ペンタグリセリン＝モノラウラート、ペンタグリセリン＝ジラウラート、ペンタグリセリン＝モノパルミタート、ペンタグリセリン＝ジパルミタート、ペンタグリセリン＝モノステアラート、ペンタグリセリン＝ジステアラート、ペンタグリセリン＝モノオレアート、ペンタグリセリン＝ジオレアート、ペンタグリセリン＝モノリノラート、ペンタグリセリン＝ジリノラート、ペンタグリセリン＝モノリシノラート、ペンタグリセリン＝ジリシノラート、ペンタグリセリン＝モノベヘナート、ペンタグリセリン＝ジベヘナート、デカグリセリン＝モノラウラート、デカグリセリン＝ジラウラート、デカグリセリン＝トリラウラート、デカグリセリン＝モノパルミタート、デカグリセリン＝ジパルミタート、デカグリセリン＝トリパルミタート、デカグリセリン＝モノステアラート、デカグリセリン＝ジステアラート、デカグリセリン＝トリステアラート、デカグリセリン＝モノオレアート、デカグリセリン＝ジオレアート、デカグリセリン＝トリオレアート、デカグリセリン＝モノリノラート、デカグリセリン＝ジリノラート、デカグリセリン＝トリリノラート、デカグリセリン＝モノリシノラート、デカグリセリン＝ジリシノラート、デカグリセリン＝トリリシノラート、デカグリセリン＝モノベヘナート、デカグリセリン＝ジベヘナート、デカグリセリン＝トリベヘナート、デカグリセリン＝モノイソステアラート、デカグリセリン＝セスキイソステアラート、デカグリセリン＝ジイソステアラート、デカグリセリン＝トリイソステアラート、デカグリセリン＝モノ（１２－ヒドロキシ）ステアラート、デカグリセリン＝ジ（１２－ヒドロキシ）ステアラート、デカグリセリン＝トリ（１２－ヒドロキシ）ステアラート等の、ポリグリセリンの脂肪酸エステル、

【００１５】(iii) プロピレングリコール＝モノラウラート、プロピレングリコール＝モノパルミタート、プロピレングリコール＝モノステアラート、プロピレングリコール＝モノオレアート、プロピレングリコール＝モノリノラート、プロピレングリコール＝モノリシノラート、プロピレングリコール＝モノイソステアラート、プロピレングリコール＝モノ（１２－ヒドロキシ）ステアラート等の、プロピレングリコールの脂肪酸エステル、

【００１６】(iv)ソルビタン＝モノラウラート、ソルビタン＝ジラウラート、ソルビタン＝モノパルミタート、ソルビタン＝ジパルミタート、ソルビタン＝モノステアラート、ソルビタン＝ジステアラート、ソルビタン＝モノオレアート、ソルビタン＝ジオレアート、ソルビタン＝モノリノラート、ソルビ

タン＝モノリシノラート、ソルビタン＝ジリシノラート、ソルビタン＝モノベヘナート、ソルビタン＝ジベヘナート、ソルビタン＝モノイソステアラート、ソルビタン＝ジイソステアラート、ソルビタン＝モノ（１２－ヒドロキシ）ステアラート、ソルビタン＝ジ（１２－ヒドロキシ）ステアラート等の、ソルビタンの脂肪酸エステル、

【００１７】(v) ショ糖＝モノラウラート、ショ糖＝ジラウラート、ショ糖＝モノパルミタート、ショ糖＝ジパルミタート、ショ糖＝モノステアラート、ショ糖＝ジステアラート、ショ糖＝モノオレアート、ショ糖＝ジオレアート、ショ糖＝モノリノラート、ショ糖＝ジリノラート、ショ糖＝モノリシノラート、ショ糖＝ジリシノラート、ショ糖＝モノイソステアラート、ショ糖＝ジイソステアラート、ショ糖＝モノ（１２－ヒドロキシ）ステアラート、ショ糖＝ジ（１２－ヒドロキシ）ステアラート等の、ショ糖の脂肪酸エステル、

【００１８】(vi)大豆油レシチン等のレシチン、等が挙げられる。

【００１９】本発明のプロポリス食品組成物は、前記（Ａ）成分、（Ｂ）成分、（Ｃ）成分および必要に応じて（Ｄ）成分を含有するものであって、（Ｃ）成分のカルボン酸基を２個以上有するか又はカルボン酸基とアミノ基とを有する有機酸の含有量は、（Ａ）成分と（Ｂ）成分の合計量１００重量部当たり１～１５０重量部の範囲で選ばれる。この（Ｃ）成分の含有量が１重量部未満では、（Ａ）成分の保持力が弱く、また、１５０重量部を超えると、均一安定な組成物をつくることが著しく困難となる。（Ａ）成分の保持力と組成物の安定性の両面から、この（Ｃ）成分の好ましい含有量は、（Ａ）成分と（Ｂ）成分との合計量１００重量部当たり５～１００重量部の範囲であり、特に１０～７５重量部の範囲が好適である。

【００２０】一方、必要に応じて加えられる（Ｄ）成分のポリオール・脂肪酸エステル系乳化剤の含有量は、（Ａ）成分と（Ｂ）成分との合計量１００重量部当たり２５重量部以下の範囲で選ばれる。この（Ｄ）成分の含有量が２５重量部を超えると、均一性の保たれた組成物の形状をつくることが著しく困難となる。なお、（Ｄ）成分が必要とされる場合には（Ａ）成分の可溶化力と組成物の形状安定性の両面から、この（Ｄ）成分の好ましい含有量は、（Ａ）成分と（Ｂ）成分との合計量１００重量部当たり０．１～１０重量部の範囲であり、特に１～５重量部の範囲が好適である。

【００２１】次に、本発明のプロポリス食品組成物の製造方法について説明する。はじめに、（Ｂ）成分の中に（Ｃ）成分又は（Ｃ）成分と（Ｄ）成分とを均一溶解若しくは安定分散させた溶液の中に（Ｅ）成分を添加した後、常圧若しくは加圧下５０～１５０℃、好ましくは６０～７５°で十分に混合撹拌して、（Ｅ）成分の軟化および微粒子化と併せて良く、（Ｂ）成分および（Ｃ）成分、さらには（Ｄ）成分との接触を行い、水溶性成分、又は水溶性成分と油溶性成分との混合物からなるプロポリス食品組成物原液を得る。

【００２２】その後、同温度範囲で、濾紙、濾過布、金網等を用いて常圧、加圧若しくは減圧濾過させ、（Ｂ）成分に不溶のプロポリス残渣を分離させることにより、（Ｂ）成分に可溶のプロポリス成分の溶液を採取する。これにより、本発明のプロポリス食品組成物を得ることができる。以下、本発明の実施例について、パネルテストの結果を交えながら、説明する。

【００２３】

【実施例】［実施例１］撹拌機、温度計及び加熱装置を備えた開放型混合機に、水６０重量部とリンゴ酸４０重量部を仕込み、常圧下、６０℃で１０分間撹拌を行い、無色透明な均一溶液を作成した。次いで、ブラジル産プロポリス原塊２０重量部を投入し、常圧下、６０～７０℃で２時間撹拌を行って、混合接触させ、水に可溶なプロポリス成分の溶液と不溶のプロポリス残渣とからなるプロポリス食品組成物原液を得た。　その後、得られたプロポリス食品組成物原液を常圧下、７０℃で２００メッシュの金網を通して濾過を行い、プロポリス食品組成物中の不溶のプロポリス残渣を分離して、赤褐色液状のプロポリス食品組成物を製造した。

【００２４】［実施例２］撹拌機、温度計及び加熱装置を備えた密閉型混合機に、水３５重量部、Ｄ－キシロース３５重量部及びグリシン３０重量部を仕込み、常圧下、８０℃で１０分間撹拌を行い、均一溶液を作成した。次いで、オーストラリア産プロポリス原塊３０重量部を投入し、３kg／cm²の加圧下、７０～８０℃で１時間、撹拌下に混合接触させて、Ｄ－キシロース水溶液に可溶なプロポリス成分の溶液と不溶のプロポリス残渣を含むプロポリス食品組成物原液を得た。その後、得られたプロポリス食品組成物原液を５０mmHgの減圧下、６０～７０℃で２号濾紙を使用して濾過を行い、プロポリス食品組成物中の不溶のプロポリス残渣を分離して、赤褐色液状のプロポリス食品組成物を製造した。

【００２５】［実施例３］撹拌機、温度計及び加熱装置を備えた密閉型混合機に、水７０重量部、クエン酸３０重量部及びテトラグリセリン＝モノオレアート１重量部を仕込み、常圧下、６０℃で３０分間撹拌を行い、乳白色半透明の均一溶液を作成した。次いで、ブラジル産プロポリス原塊２０重量部を投入し、常圧下、６５～７５℃で１時間、撹拌下に混合接触させて、水に可溶なプロポリス成分の溶液と不溶のプロポリス残渣を含むプロポリス食品組成物原液を得た。その後、得られたプロポリス食品組成物原液を、常圧から5kg／cm²までの加圧下に、２号濾紙と濾過布を通して濾過を行い、プロポリス食品組成物中の不溶のプロポリス残渣を分離して、褐色液状のプロポリス食品組成物を製造した。

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【００２６】［比較試験例Ｉ及びII］（Ｃ）成分の有機酸を用いずに、下記原料配合のもとに、実施例３と同様の成分抽出及び濾過操作によって行った。

比較例Ｉ……ブラジル産プロポリス原塊２０重量部、水７０重量部、グリセリン３０重量部及びテトラグリセリン＝モノオレアート１重量部

比較例II……ブラジル産プロポリス原塊２０重量部、水７０重量部、グルコン酸３０重量部及びテトラグリセリン＝モノオレアート１重量部

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【００２７】［実施例４～１０］以下、プロポリス原塊、溶剤、所定の有機酸及び必要に応じてポリオール・脂肪酸エステル系乳化剤の種類並びに割合を変えた以外は、実施例１、２及び３と同様にして、７種類のプロポリス食品組成物を製造した。それら７種類のプロポリス食品組成物の原料配合割合と製造方法を一覧にして、表１に示す。

【００２８】

【表１】

表１

| 実施例 | ﾌﾟﾛﾎﾟﾘｽ原塊 | 溶　剤 | 所定の有機酸 | ﾎﾟﾘｵｰﾙ・脂肪酸ｴｽﾃﾙ系乳化剤 | 製造方法 |
|---|---|---|---|---|---|
| 4 | ﾌﾞﾗｼﾞﾙ産 ﾌﾟﾛﾎﾟﾘｽ原塊 15重量部 | 水　40重量部 ｴﾁﾙｱﾙｺｰﾙ 45重量部 | ﾘﾝｺﾞ酸 1重量部 | ―――― | 実施例１の製造方法に準ずる |
| 5 | ﾌﾞﾗｼﾞﾙ産 ﾌﾟﾛﾎﾟﾘｽ原塊 25重量部 | 水　75重量部 | ｸｴﾝ酸 10重量部 ﾘﾝｺﾞ酸 10重量部 | ｿﾙﾋﾞﾀﾝ=ﾓﾉﾗｳﾗｰﾄ 3重量部 | 同　上 |
| 6 | ﾌﾞﾗｼﾞﾙ産 ﾌﾟﾛﾎﾟﾘｽ原塊 10重量部 | 水　40重量部 ｴﾁﾙｱﾙｺｰﾙ 59.5重量部 ﾌﾟﾛﾋﾟﾚﾝｸﾞﾘｺｰﾙ 0.5重量部 | ｸﾞﾙﾀﾐﾝ酸 0.8重量部 ｺﾙｸ酸 0.2重量部 | ｼｮ糖=ﾓﾉｵﾚｱｰﾄ 15重量部 ﾌﾟﾛﾋﾟﾚﾝｸﾞﾘｺｰﾙ= ﾓﾉｵﾚｱｰﾄ 5重量部 大豆油ﾚｼﾁﾝ 5重量部 | 実施例２の製造方法に準ずる |
| 7 | 米国産 ﾌﾟﾛﾎﾟﾘｽ原塊 20重量部 | 水　20重量部 ｸﾞﾘｾﾘﾝ 60重量部 | ｱｽﾊﾟﾗｷﾞﾝ酸 1重量部 ｸﾞﾘｼﾝ 9重量部 ｱﾗﾆﾝ 10重量部 | ｸﾞﾘｾﾘﾝ=ﾓﾉﾗｳﾗｰﾄ 0.5重量部 ﾍﾟﾝﾀｸﾞﾘｾﾘﾝ= ﾓﾉｽﾃｱﾗｰﾄ 1重量部 | 同　上 |
| 8 | ﾄﾞｲﾂ産 ﾌﾟﾛﾎﾟﾘｽ原塊 5重量部 | 水　80重量部 ｴﾁﾙｱﾙｺｰﾙ 15重量部 | ｸｴﾝ酸 100重量部 ﾘﾝｺﾞ酸 25重量部 ｸﾞﾘｼﾝ 25重量部 | ｼｮ糖=ﾓﾉﾗｳﾗｰﾄ 2重量部 ﾍﾟﾝﾀｸﾞﾘｾﾘﾝ= ｼﾞﾘﾉﾗｰﾄ 2重量部 | 実施例３の製造方法に準ずる |
| 9 | 中国産 ﾌﾟﾛﾎﾟﾘｽ原塊 15重量部 | 水　30重量部 Dｰｷｼﾛｰｽ 55重量部 | ｱｽﾊﾟﾗｷﾞﾝ酸 10重量部 | ―――― | 同　上 |
| 10 | ｵｰｽﾄﾗﾘｱ産 ﾌﾟﾛﾎﾟﾘｽ原塊 20重量部 | 水　70重量部 Dｰｿﾙﾋﾞｯﾄ 10重量部 | ｸｴﾝ酸 20重量部 ｸﾞﾙﾀﾐﾝ酸 20重量部 | ｿﾙﾋﾞﾀﾝ=ﾓﾉﾘｼﾉﾚｰﾄ 1重量部 ﾃﾄﾗｸﾞﾘｾﾘﾝ= ﾓﾉﾘｼﾉﾚｰﾄ 1重量部 | 同　上 |

【００２９】［実施例１１］実施例１～１０で得られた１０種のプロポリス食品組成物及び比較例Ｉ、IIで得られた２種のプロポリス食品組成物を各々５０ｇづつシャーレに採り、２００メッシュのテトロン布網を上にかぶせた後、一般生菌が存在している２０℃、６０％ＲＨ恒温恒湿条件の部屋に３ヶ月間静置させた。つづいて、テトロン布網を取って、３ヶ月後の外観の変化を観察した後、表層部分を検査用培地（但し、日水製薬製フードスタンプを使用）につけ、３７℃で２４hr培養させた。

【００３０】結果を表２に示したが、本発明のプロポリス食品組成物は全く液性が安定しており、しかも、水系でありながら腐敗による菌発生も見られなかった。

【００３１】

【表２】

表２

| 実　施　例 | ３ヶ月後の外観 | 一般生菌の有無 |
|---|---|---|
| 1 | 均一（変化なし） | 無 |
| 2 | 同　上 | 〃 |
| 3 | 〃 | 〃 |
| 4 | 〃 | 〃 |
| 5 | 〃 | 〃 |
| 6 | 〃 | 〃 |
| 7 | 〃 | 〃 |
| 8 | 〃 | 〃 |
| 9 | 〃 | 〃 |
| １０ | 〃 | 〃 |
| 比較例Ｉ | 表面に浮遊物生じる | 有 |
| 比較例II | 周りが黒ずむ | 〃 |

【００３２】［パネルテスト例１］２０歳から７０歳までの男女から、高血圧症の症状を有する男女を無作為に１２０人選んで対象者とし、実施例１～１０で得られた１０種のプロポリス食品組成物及び比較例Ｉ、IIで得られた２種のプロポリス食品組成物１．０ｇを１００mlの水に添加した水性飲料を作り、１種の飲料について１０人の対象者に飲用させて、食感を調査した。つづいて、各人それぞれの必要量だけ日本酒（但し、大倉酒蔵社製月桂冠１級を使用）を飲ませ、３時間経過後の気分について回答してもらった。

【００３３】調査結果を表３に示したが、本発明のプロポリス食品組成物は比較例Ｉ及びIIのプロポリス食品組成物に比べて食感に優れ、かつ、性能発現効果も極めて良好であることが確認された。

【００３４】

【表３】

表３

| 実　施　例 | 飲用時の食感 *1 | 飲酒終了３時間後の気分*2 |
|---|---|---|
| 1 | ◎ | A |
| 2 | ◎ | A |
| 3 | ◎ | A |
| 4 | ◎ | A |
| 5 | ◎ | A |
| 6 | ◎ | A |
| 7 | ◎ | A |
| 8 | ◎ | A |
| 9 | ◎ | A |
| １０ | ◎ | A |
| 比較例Ｉ | △ | B |
| 比較例II | ○ | C |

＊１　飲用時の食感の評価基準は次の通りである。

◎…１０人の試飲者中８人以上が味覚、清涼感共に良好であると感じたもの

○…１０人の試飲者中７人以上が清涼感について良好であると感じ、味覚について良好と感じた者が５人以下のもの

△…１０人の試飲者中５人以上が味覚について良好であると感じ、清涼感について良好であると感じた者が５人以下のもの

＊２　飲酒終了３時間後の気分の評価基準は次の通りである。

A…１０人の試飲者全員が疲れが取れ、気分爽快になったと感じたもの

B…１０人の試飲者中７～９人が疲れが取れ、気分爽快になったと感じたもの

C…１０人の試飲者中、疲れが取れ、気分爽快になったと感じた者が６人以下のもの

【００３５】［パネルテスト例２］１５歳から６５歳までの男女から、慢性鼻炎及び花粉症の両方の症状を有する男女を無作為に１２０人選んで対象者とし、実施例１～１０で得られた１０種のプロポリス食品組成物及び比較例Ｉ、IIで得られた２種のプロポリス食品組成物０．５ｇを１００mlの水に添加した水性飲料を作り、１種の飲料について１０人の対象者に朝、昼、夜１日３回づ

つ、３ヶ月間連続して飲用させた。しかる後、慢性鼻炎及び花粉症の症状が快方に向かっていると感じられるか否かについて回答してもらった。

【００３６】調査結果を表４に示したが、本発明のプロポリス食品組成物は、従来のミセル抽出法によって製造された比較例Ｉのプロポリス食品組成物や、カルボ酸基１個からなるオキシ酸添加物を配合する比較例IIのプロポリス食品組成物に比べて、性能発現効果が優れていることが判明した。

【００３７】

【表４】

表４

| 実　施　例 | 慢性鼻炎の症状の変化 *1 | 花粉症の症状の変化 *2 |
|---|---|---|
| 1 | ◎ | ◎ |
| 2 | ◎ | ◎ |
| 3 | ◎ | ◎ |
| 4 | ○ | ◎ |
| 5 | ◎ | ◎ |
| 6 | ◎ | ○ |
| 7 | ◎ | ◎ |
| 8 | ◎ | ◎ |
| 9 | ◎ | ◎ |
| １０ | ◎ | ◎ |
| 比較例Ｉ | △ | △ |
| 比較例II | △ | △ |

＊１　慢性鼻炎の症状の変化の評価基準は次の通りである。

◎…１０人の試飲者全員が症状が快方に向かったと感じたもの

○…１０人の試飲者中７～９人が症状が快方に向かったと感じたもの

△…１０人の試飲者中、症状が快方に向かったと感じた者が６人以下のもの

＊２　花粉症の症状の変化の評価基準は次の通りである。

◎…１０人の試飲者全員が症状が軽減したと感じたもの

○…１０人の試飲者中７～９人が症状が軽減したと感じたもの

△…１０人の試飲者中、症状が軽減したと感じた者が６人以下のもの

【００３８】

【発明の効果】以上に述べた如く、本発明のプロポリス食品組成物及びその製造方法は、水系均一溶液、若しくはその中にポリオール・脂肪酸エステル系乳化剤をさらにミセル溶解させている溶液中に、カルボン酸基を２個以上有するか若しくはカルボン酸基とアミノ基とを共存させている有機酸を均一溶解若しくは分散させることで、プロポリス原塊に含まれている不必要な夾雑物の溶出を抑えつつ、有効成分を抽出させることを行って、均一液相状態を保持し、かつ、腐敗防止性も付与して、性能発現効果を高める。よって、本発明を実施することにより、食感向上と保存安定を果たした、より信頼性の高い水系のプロポリス成分含有食品を提供することができる。